

# RACHORRAGE AMATEUR RADIO CLUB

PRESIDENT FRED WEGMER  
KL7HFM 274-3464  
CLUB PHONE: 345-0219

NOVEMBER 1992

NOVEMBER

1992

NOVEMBER

November 6 GENERAL MTG 7 PM Room 102 Carr-Gottstein Bldg Alaska  
Pacific University East end of 36th  
Ave. 1st Bldg on the left Use Parking Lot.

PROGRAM - Hear About Prime Cable - See Page 3 for details

## Renewal of Marriage Vows - Doug and Carol Dickenson

As some of you may know, I had some chassis modifications done to my "Onboard CPU" last year. One of the side effects of the tumor and its removal, has been some scrambled memory, and memory loss. With this in mind, Carol and I have decided to renew our 'Vows of Marriage'. I have somehow misplaced the memories of our first ceremony over 20 years ago.

All of our Amateur Friends are invited to the Renewal of Vows ceremony on the 13th November at 7 PM at St. Johns United Methodist on O'Malley Road. (Yes!) This is a Friday the 13th and I actually chose that date for a reason that may not be too obvious. I need help (alot of help some say) in remembering dates, this should be different enough that even with numerous bytes missing, I can remember it!

i 5

This is going to be a semi-formal, semi-laidback affair. Be forewarned that I intend to wear my suit and tie, (if I can get the spider webs removed in time), so you may not recognise me! Children of all ages are more than welcome.

We are hoping this will be a happy and fun time that helps write new memories to the memory "chips".

73 Doug KL7IKX and Carol Dickinson (and JD too!)

EDITOR-HARVEY ROOKUS - NL7DK  
3310 CHECKMATE DR. ANCHORAGE  
ALASKA 99508 (907) 333-4693

The Anchorage Amateur Radio Club boardmeeting was held on October 14, 1992 and was opened at 7:05 PM by President Fred Wegner. The following boardmembers were present: KL7HFM, AL7BB, AL7MO, NL7DL, AL7HS, NL7VR, KL7IKX, KL7ITI, AL7NK, AL7BK, KL7FHX, NL7UH, NL7DK. also present were WL7BF and NL7NN. AL7ID came in late.

Lil read the minutes for both the general meeting and the boardmeeting for the month of September.

Fielder KL7FHX, club treasurer, suggested that the club hire an accounting firm to aid the treasurer in his job. The board discussed the possibility of obtaining volunteers to help the treasurer in various tasks.

Fred KL7HFM reported \$17,926.00 in the gaming account. He recommended putting \$15,000.00 into the Alaska Pacific University's endowment fund.

When the education ad hoc committee presents its program, gambling funds will be transferred to the committee. The general membership will vote on the appropriation of funds at the next general meeting.

NL7UH reported that the ad hoc committee will probably not be ready with a program by next January 1st. They will continue to work on a program and will have it ready as soon as possible.

The board discussed the revisions of the by-laws. The discussion will be continued at the next boardmeeting.

Next year's Flea Market will be run by a committee. So far, the committee consists of 1 member-KL7FZ. Any other volunteers? Susan NL7NN and Billy AL7BB will be consultants to the committee.

Richard AL7MO, Activities Manager, reports that the next program will cover Prime Cable. He also reports having \$192.50 from the last monthly club raffle. Among the prizes to be offered at the next monthly club raffle will be a beam antenna.

For those of you who have not yet bought your book of raffle tickets for the annual club Christmas raffle, call Lil Marvin at 277-6741 for your book(s) now, thereby keeping your arms and legs intact!

Any one who would like to offer suggestions or aid in helping the treasurer out in his work may contact Fielder at 563-6733 or Fred at 274-3464.

Respectfully Submitted,

*Lil Marvin NL7DL*

## ANCHORAGE AMATEUR RADIO CLUB General Meeting Oct. 14, 1992

The general meeting of the Anchorage Amateur Radio Club was opened at 7:00 PM on October 14, 1992 by President Fred Wegner KL7HFM.

Roger KL7HFQ read a letter addressed to him from a man in Boston requesting a list of volunteer examiners to be sent to him as he is interested in obtaining a novice license.

Comments on FCC Docket 92-154 were due on Oct. 9th. Fred KL7HFM suggested sending in comments on Senate Bill 218 to Sens Stevens and Murkowski.

The Emergency Office Coordinator for the city of Anchorage, Mr. Bob Stewart, was the guest speaker for the evening. He briefly discussed the latest volcanic eruption, as well as the Oct 1 emergency fire drill.

The Emergency Office Coordinator would like to install a media center in the Anchorage area and to have both the incident commander and the emergency office coordinator in the same place. The EOC office has 2-meter amateur radio for communications with local hospitals and other emergency organizations. They would like to upgrade their HF amateur radio equipment to provide better communication with both the lower 48 and the state of Alaska. This will hopefully be done if the next bond issue passes.

Mr. Stewart also talked about using amateur radio operators in the future for both search and rescue efforts and in helping provide damage assessment reports in disasters. He also discussed the possibility of using hams to listen on volcano reports, as their information seems to be more updated than that which is received by the EOC.

The raffle tickets were drawn and prizes were awarded. Lil is going to hunt down the hams who won her M&M's and break their legs if they don't cough up!!

The eatin' after the meetin' was held at Elmer's, as usual.

Respectfully Submitted,

*Lil Marvin NL7DL*

Lil Marvin NL7DL

### Calendar 1991-1992

July 1992	January 1993
General Mtg 3rd Board Mtg 8th PARKA Mtg 25th	General Mtg 8th Board Mtg 13th PARKA Mtg 26th

August	February
--------	----------

General Mtg 7th Board Mtg 12th PARKA Mtg 29th Bush Net Picnic 15th	General Mtg 1st Board Mtg 13th Fur Rondy - Grand Prix 16th - Dog Races 22/23/24 Iditarod Sled Dog Races PARKA Mtg 23rd
---	---

September	March
-----------	-------

General Mtg 4th Board Mtg 9th Flea Market/Hamfest 26/27 PARKA Mtg ???	General Mtg 1st Board Mtg 13th PARKA Mtg 23rd
--	---

OCTOBER	April
---------	-------

General Mtg 2nd Board Mtg 14th PARKA Mtg 31st	General Mtg 5th Board Mtg 10th PARKA Mtg 27th
---	---

November	May
----------	-----

GENERAL MIG 6th BOARD MIG 11th PARKA MIG 28th	General Mtg 3rd Board Mtg 8th Walk For Hope PARKA Mtg 22nd
---	---

December	June
----------	------

Club Christmas Party 4th Board Mtg 9th PARKA Mtg 28th	General Mtg Election 4th Board Mtg New/Old 9th Field Day 26/27 PARKA Mtg 26th Motley Picnic (Byers Lake)
---	--

If there are any Additions or Corrections to the Calendar, please call NL7DL at 333-4693. Thanks!

## AARC PROGRAM LOG

Bob Stewart, the head of the Anchorage Office of Emergency Management, was delayed in getting to the October meeting by the beginning of another possible emergency. After spending the day on Friday, October 2nd reviewing the results of the Simulated Emergency Test held the day before, he was called to the Governor's house because of a perceived change in the volcanic activity of Mt. Spur. The volcano was being upgraded from Orange to Red, indicating the possibility of an imminent eruption.

By the time the club members began arriving at the meeting, the word was already out that there was a possibility that the volcano could go again. While our President, Fred KL7HFM, was conducting the business portion of the meeting, several of the audience dialed up the NOAA weather station on their two meter handhelds and quietly monitored the weather conditions. If the volcano were to erupt, an emergency broadcast system bulletin would have been put on the air over the NOAA station on its' frequency of 162.55 mhz.

Frank, NL7HP and Lil, NL7DL, both reported on the SET from their viewpoints. The premise of the exercise was a fire in the Frontier Building at 36th and C Streets. Some of the non-ham volunteers pretended to be injured and/or suffering from smoke inhalation. The test also included the effects of hazardous materials as a result of the fire reaching stored chemicals.

We learned that the efforts of the hams involved in the exercise enabled the MOA to avoid losing any of the buses used in the exercise. There were enough ham volunteers to put one on every bus that was used to ferry the "injured" to the participating hospitals.

Once Bob reached the meeting, he informed us that an eruption was not necessarily imminent. The upgrade in status from Orange to Red was due to a similarity in seismic activity to the activity taking place before the first eruption back on Field Day in June.

Bob told us that the weather pattern was such that the winds would blow any volcanic fallout either to the North or the South, depending upon the height of the dust cloud above ground. The low level winds and the upper level winds were blowing in opposite directions, but both would direct any dust away from Anchorage.

If the volcano went, Bob told us that we could expect to have a terrific view as the weather for Anchorage was to be clear for Saturday and Sunday. Fortunately, for both Anchorage and the areas north and south of the volcano, there hasn't been an eruption as of when this article was written in Mid-October.

## November Program Speakers

Our two guest speakers at the November 6th general meeting will be Dave Smith and Gary Haynes from Prime Cable. Dave is the Technical Supervisor and Gary is the Director of Operations. They will be speaking on interference to and from the cable system as well as the latest technology being introduced to cable television systems. As they are from the technical side of Prime Cable's Anchorage operation, they WON'T be the ones to ask about the channel changes that go into effect on November 1st.

We were informed that as a result of the two SETs this year, the Office of Emergency Management would be returning to its' old quarters at the 80th Avenue Fire Department Building. The move will put the emergency communications center back into the center of the action again.

## November Raffle Prizes

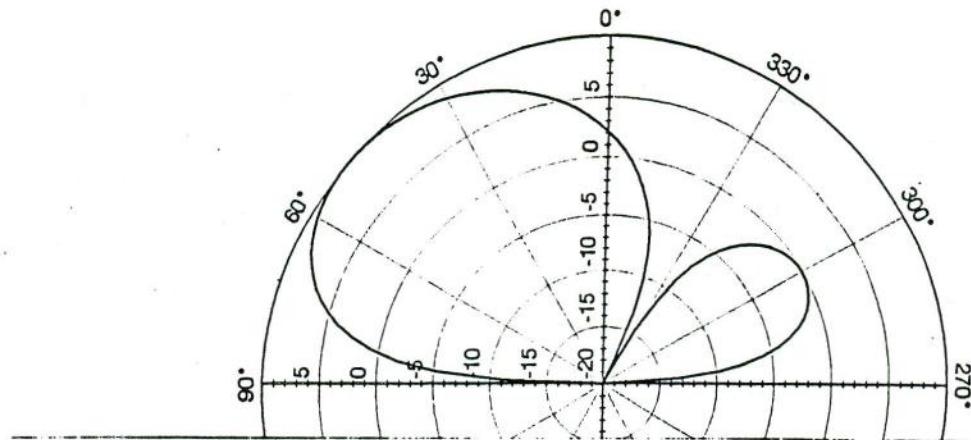
The Legendary AARC Raffle Prizes for the November meeting will include a three element portable two meter beam antenna from MFJ and an IBM compatible packet board kit from Ramsey Electronics.

The portable two meter antenna is suitable for permanent installation at your QTH or for storing in the trunk of your car for portable or emergency use. It is designed for quick assembly and can even be used on a backpacking, mountain topping VHF dxpedition.

The Ramsey kit enables you to use your IBM compatible computer to get onto packet without a Terminal Node Controller. The kit includes the Baycom 1.2 software on a 5.25 inch diskette. The software program uses the computer itself to replace all but the modem portion of a TNC. This kit makes a great weekend project for any amateur wanting to get into packet radio!

## ANCHORAGE PUBLIC RADIO STATION KSKA GAINS HAM VOLUNTEER

By the time this newsletter reaches you, Anchorage Public Radio Station KSKA will have another volunteer board operator and announcer. Richard, AL7MO, is returning to the FM dial after an absence of 16 years. He will be working as a volunteer on the 5 AM to 8 AM Sunday Morning shift each week. He said that since he was already up at that time to listen to the CBC Sunday Morning program, he might as well volunteer for the shift.



**2 ELEMENT BEAM LENGTHS FOR VARIOUS HAM BANDS  
2EL.BAS**

Frequency	Antenna	Director	Spacing
1.90 MHz	236.ft	12.in	251.ft 9.in 62.ft 8.in
3.70 MHz	121.ft	8.in	129.ft 3.in 32.ft 2.in
3.90 MHz	115.ft	5.in	122.ft 8.in 30.ft 7.in
7.15 MHz	62.ft	12.in	66.ft 11.in 16.ft 8.in
10.12 MHz	44.ft	6.in	47.ft 3.in 11.ft 9.in
14.18 MHz	31.ft	9.in	33.ft 9.in 8.ft 5.in
18.11 MHz	24.ft	10.in	26.ft 5.in 6.ft 7.in
21.25 MHz	21.ft	2.in	22.ft 6.in 5.ft 7.in
24.93 MHz	18.ft	1.in	19.ft 2.in 4.ft 9.in
28.40 MHz	15.ft	10.in	16.ft 10.in 4.ft 2.in
51.00 MHz	8.ft	10.in	9.ft 5.in 2.ft 4.in
145.00 MHz	3.ft	1.in	3.ft 4.in 0.ft 10.in
147.00 MHz	3.ft	1.in	3.ft 3.in 0.ft 10.in

Antenna Center Impedance at resonance = 23.6 Ohms  
Antenna gain at 45 deg. when 1/4 WL high = 10 db.

### Two Element Beam

These dimensions are for the simplest and cheapest form of Yagi beam antenna, the two element beam. This beam may be made of wire, solid rod or pipe. It will have gain equal to most 3 element beams, since the third element often is only used to control the front-to-back ratio and therefore does not contribute gain. Note that this pattern is a vertical cut through the antenna radiation pattern. The ground is assumed to be summertime, wet, Alaska tundra. In winter the gain may be slightly less. The most important section of the pattern is always the part between 5 and 15 degrees since 90 percent of the skip contacts come in this window. Putting the beam at one half wave length or higher helps this part of the beam pattern. Being realistic this pattern was calculated for a very low beam with quarter wave length height. The 20 meter beam I built from these dimensions worked very well. Good luck.

- 73, AL7KK, Rob

Special Tnx! go to Richard Mote AL7MO for the New Layout you are seeing in the Newsletter. Richard has been doing these as I have received news for the Club. It certainly is improving the Looks I think and I hope you do also. Thanks Richard!! Editor

### For Sale

Icom 02AT 2 mtr HT w/BC25U charger, 2 BP3 Batteries, CM-1 Cigarette liter pwr cable, HS-10SB headset/spkr mike, 5/8 wave telescoping antenna and leather carrying case. Contact Ed NL7VP @ 243-4348

## KFMU, THE SOUND OF THE WIND

KFMU was no ordinary radio station back in the 70's. It was the world's only wind-powered commercial radio station and was unique in its programming and service philosophy. The owner of the station wanted to serve a community of 800 with the world's lowest powered commercially licensed FM broadcasting station. KFMU transmitted on the Class A FM channel of 103.9 mhz with an effective radiated power of 55 watts!

This made KFMU the equivalent of an FM QRP station; a commercially licensed station operating below the normal minimum power level of 100 watts for Class A community stations. Class A stations were allowed to operate between 100 and 3,000 watts back then. Today, such stations can now run as much as 6,000 watts.

KFMU's studio was located in "Beautiful Downtown Bur. . , uh, Oak Creek, Colorado," and transmitted from three miles away, high atop one of the Rocky Mountain peaks to the Yampa River Valley, the ski resort town of Steamboat Springs and the coal mining communities of Hayden and Craig, Colorado.

The transmitter location allowed this QRP FM station to cover a distance of over 50 miles wherever intervening terrain did not interfere with the line of sight.

The station was operated by local volunteers even though it was a commercially licensed station since there wasn't enough business in the area to fully support the station through advertising. The announcers played music in blocks of a half-hour each, before breaking for several commercials and a station identification. They played country in the mornings, easy listening, top 40 in the daytime, and classical, jazz and album rock at night. The owner had to live in Denver and work for one of the hospitals in order to keep the station on the air.

At the KFMU transmitter site, the station was three miles by foot and 4,000 feet up from commercial power. So, the station's owner turned to wind power which was in abundance atop the mountain peaks (as anyone who has flown over the Rockies in a DeHavilland Twin Otter will tell you).

While the technology to generate electricity from the wind had been available for well over half a century before KFMU, actual application had been hampered by the relatively high capital costs, lack of suitable storage systems and the variability of the wind itself.

Use of wind-generated electricity reached a peak in the 1930's and 40's principally on the farms and remote areas with over two dozen domestic manufacturers supplying thousands of small wind generators.

Lastening the demise of the wind generator was the rapid increase of farm use of electricity which made a system purchased even a few years earlier insufficient in capacity.

Wind electric systems are still almost non-existent today, even after a rise in popularity during the late 70's, and serve only in a handful of situations where high-line power is unavailable because of distance or environmental concerns, or the user is a romantic.

KFMU used a duplicate of a 1930's farm electric system powered by a 32 volt Model 2700 Jacob's made in Minneapolis in 1947. Using an old generator saved KFMU the high capital costs encountered with extending commercial power to their transmitter site. To have run a high line power line to the site in 1974 would have cost in excess of \$15,000 versus a cost of \$2,000 for the wind powered system.

The direct drive Jacobs sat atop the tower and was powered by an air foil type 3 bladed prop with a centrifugal type hub speed governor. The generator began producing power when winds reached ten miles per hour. At 15 miles per hour, it produced enough to run the station and reached full power output of 2,700 watts at a wind speed of 25 miles per hour.

The generator was connected to a 600 ampere-hour battery bank through a voltage regulator which prevented overcharging. The battery bank had sufficient capacity to operate the station for six consecutive windless days. The station regulated the voltage drawn from the bank to 24 volts to operate the rest of the equipment.

They powered a 20 watt Gates FM exciter, a stereo generator, an FM subcarrier generator and the studio-to-transmitter link receiver from the 24 volt power supply. Initially, KFMU consumed 320 watts per hour, but eventually, they decreased the usage down to 180 watts per hour.

Today, KFMU has relocated to Steamboat Springs and gone upscale as an album rocker. The move occurred after the original owner sold the station around 1982. When they moved the transmitter to the top of the Steamboat Springs ski slopes, they increased power to 265 watts and switched to commercial power.

Since KFMU went on the air, there have been other QRP FM stations go on the air. Almost all are taking advantage of the tradeoff in the FCC's rules between height and allowed power levels to increase the range of their Class A community FM stations.

KFMU was an interesting experiment in local radio, but it will be remembered most for having been the only wind-powered commercial broadcasting station.

QRP broadcasting in Anchorage includes the University Of Alaska, Anchorage's student operated station, KRUA on 88.1 mhz with 140 watts effective radiated power from near Flattop Mountain and the KSKA translator in Eagle River on 88.5 mhz with approxiamtely 50 watts effective radiated power. Both have large coverage areas due to their great height up in the hills.

# AARC Newsletter Shifting To Computerized Typesetting

Beginning with this issue of the Newsletter, you will begin to see more articles and columns in each issue typeset with the aid of a personal computer.

Currently, the processing program in use is Microsoft's Word For Windows, 2.0. For the price, this is the most versatile word processing program; however, it is still a compromise processing program for publishing a newsletter.

Eventually, processing will be upgraded to a publishing program such as Microsoft's Publisher.

The Newsletter will now be able to accept submissions for publication either typewritten as before, or on 3.5 or 5.25 inch IBM compatible formatted disks. Submissions should be made to the Newsletter Editor, Harvey Rookus, NL7DK.

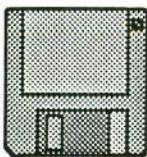
The word processing program in use has converters for the following programs: *Word for Windows 1.x*, *Word for DOS 4.0/5.0/5.5*, *Word for the Macintosh 4.0/5.0*, *WordPerfect 4.1/4.2/5.0/5.1*, *DisplayWrite*, *Works for Windows*, *Works 2.0 for DOS*

*Wordstar 3.3/3.45/4.0/5.0/5.5*, *Lotus 123 2.x/3.0*, *Microsoft Excel 2.x/3.0/4.0*, *Multiplan 3.0/4.2*, *dBase II/III/III+/IV*, *Text and DOS Text (text only, text only with line breaks, and text with layout)*, and *Rich Text Format (\*.RTF)*.

Graphics can also be imported with the Word for Windows 2.0 program. An example is shown in the accompanying box. Graphics can be imported from the following graphic file formats: *Windows Metafile (\*.WMF)*, *Encapsulated PostScript (\*.EPS)*, *Tagged Image File format (\*.TIF)*, *Computer Graphics Metafile (\*.CGM)*

*HP Graphic Language (\*.HGL)*, *DrawPerfect (\*.WPG)*, *Micrografx Designer 3.0/Draw Plus (\*.DRW)*, *PC Paintbrush (\*.PCX)*, *Windows Bitmaps (\*.BMP)*, *AutoCAD 2-D format (\*.DXF)*, *AutoCAD Plotter format (\*.PLT)* and *Lotus 123 Graphics (\*.PIC)*.

You can submit articles and columns for the Newsletter on 3.5 inch IBM formatted disks like the one below or on 5.25 inch disks.



Submissions to the Newsletter can include your own artwork created in these graphic formats. This would include clip art or cartoons related to electronic computers or amateur radio that you have created yourself. Or you can use your own graphics to illustrate an article, such as drawing circuits, antenna patterns, etc.

## VEC REPORT

COMMUNITY	CALL	FROM	TO
<b>ANCHORAGE</b>			
Terrance J. Brady		No License	NC Technician
Jay N. Dearborn		No License	NC Technicia
Patricia K. Ham		No License	Novice
David C. Haring	WL7DB	Technician	Advanced
William L. Johnson	WA0LKT	Advanced	Extra
Norman G. Kayton	WL7BER	Novice	HF Technician
Rex E. Keirn, Sr. **	WL7BJ	Technician	General
John K. Lamb, II	WL7CA	Technician	General
John D. Langren		No License	NC Technician
Kenneth F. Lower	NL7WJ	Advanced	Extra
Denise M. Marsh		No License	NC Technician
Barbara A. Meyer	AL7OA	Advanced	Extra
Johnny R. Moore	KL7IRA	Advanced	Extra
J. Daniel Roach	NL7TD	General	Advanced
Hazel C. Schofield	WL7CFJ	Technician	General
John M. Simpson		No License	NC Technician
James D. Tudehope	KL7QR	Advanced	Extra

## FAIRBANKS

James W. Alexander	KA0TRV	Novice	HF Technician
Shanna Butler		No License	NC Technician
Daniel E. Bettinger (16 years old)	WL7EG	General	Advanced
Andre M. Clay	NL7RK	General	Extra
Russell J. Gore	WL7AG	Technician	General
Virgil W. Hoppe	NL7VB	General	Advanced
Fabian J. N. Keirn (16 years old)		No License	NC Technician
Rex E. Keirn, Sr.**	WL7BJ	NC Technician	HF Technician
Robert L. Kreiser		No License	NC Technician
William L. LeFever	WL7BQ	General	Advanced
Durell Smith	KB5QOH	Novice	HF Technician

## PALMER

Robert L. Alvord	WL7BOA	HF Technician	General
------------------	--------	---------------	---------

NC TECHNICIAN	= NO	CODE TECH
HF TECHNICIAN	= HF	PRIVILEGES

\*\*WL7BJ upgraded from NC Technician to HF Technician at the Fairbanks test and then to General at a testing session in Anchorage!

Submitted by Roger Hansen, KL7HFQ, VEC Director

**WANTED: Good Home For Orphan Computer!**  
Sinclair ZX-81; 16k RAM, Thermal Printer, After Market Keyboard, Manuals and Software Cassettes. Uses regular audio cassette recorder for data storage. Contact Richard, AL7MO at 248-9191.

**AARC GENERAL MEETINGS**  
are held on the first Friday evening of each month in Room 102 of the Carr-Gottstein Building on the Alaska Pacific University Campus.

The campus is located at 4101 University Drive and Bragaw Streets. Parking is available only in the lot to the northeast of the building.

The meetings begin at 7:00 PM and visitors are always welcome! The AARC legendary raffle is open to everyone.

**AARC BOARD MEETINGS** are held on the second Wednesday evening of each month in Room 104 of the Carr-Gottstein Building on the APU campus.

The meetings begin at 7:00 PM and are open to all club members and visitors.

**AARC MID MONTH SOCIALS** are held on the third Wednesday evening of each month (except June, November and December). They begin at 7:00 PM at the Royal Fork Buffet Restaurant, 800 Northway Drive. Visitors are always welcome!

**THE KL7AA REPEATERS** sponsored by the club are on 146.94 (-.600), 224.94 (-1.600) and 444.7 (+5.000). The two meter repeater located on top of Flattop Mt. requires a 100 hz tone for access. The satellite receiver located on Government Hill does not require a tone.

The 125 cm repeater, also on Flattop Mt. and the 70 cm repeater located at the South Central Radio site do not require tone for access. The repeater trustee is William Reiter, KL7ITI. Paul Spatzek, WL7BF is head of the VHF/UHF committee.

**FREE LICENSE EXAMS** are held on the first Wednesday evening of the month at 7PM in the Carr-Gottstein Bldg on the APU campus and on the third Wednesday evening of the month in Eagle River at 7PM at the VFW Hall.

For more information contact VEC Director, Roger Hansen, KL7HFQ at 892-6365.

**ANCHORAGE ARES NET** The Anchorage area Amateur Radio Emergency Services net is held each Thursday evening at 8:00 PM on the KL7ION repeater on 147.3 (+.600).

Net Control is Lil Marvin, NL7DL and alternate NCS station is KL7IO.

The Westlink Amateur Radio report, Swap N Shop and the Parka Net follow the ARES net on the same frequency.

## ANCHORAGE AMATEUR RADIO CLUB, INC. - PO BOX 101987 - ANCHORAGE, AK 99510-1987

NAME \_\_\_\_\_ CALL SIGN \_\_\_\_\_

ADDRESS \_\_\_\_\_ LICENSE CLASS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_ LICENSE EXPIRATION DATE \_\_\_\_\_

PHONE; HOME \_\_\_\_\_ BUSINESS \_\_\_\_\_ ARRL MEMBER? YES \_\_\_\_\_ NO \_\_\_\_\_ LIFE \_\_\_\_\_

YOUR STATION CAPABILITIES; HF \_\_\_\_\_ VHF \_\_\_\_\_ UHF \_\_\_\_\_ MOBILE HF \_\_\_\_\_ MOBILE VHF \_\_\_\_\_ MOBILE UHF \_\_\_\_\_

AMSAT/OSCAR \_\_\_\_\_ RTTY \_\_\_\_\_ PACKET \_\_\_\_\_ OTHER \_\_\_\_\_

Do you have other special interest in Amateur Radio? \_\_\_\_\_ MICROPROCESSOR/DIGITAL \_\_\_\_\_

TRANSMITTER HUNTS \_\_\_\_\_ FIELD DAY \_\_\_\_\_ FLEA MARKET \_\_\_\_\_ OTHER \_\_\_\_\_

NOTE; Membership period is one year from date you pay. Grace period is thirty days after your due date.

DUES; \$20.00 Regular    \$25.00 Family    \$10.00 Student

Life memberships available; contact Lance Dunbar, AL7BK for information at (H) 337-6297 or (W) 561-5457



## MEMBERSHIP APPLICATION

**EDITOR'S NOTE;** Please remember, the Anchorage Amateur Radio Club benefits financially if you enter your ARRL membership renewal through the club.

ANCHORAGE AMATEUR RADIO CLUB, INC.  
Post Office Box 101987  
Anchorage, Alaska 99510-1987

Address Correction Requested

BULK RATE  
U.S. POSTAGE  
PAID  
Anchorage, AK  
Permit 223

L036 EX0499 L                   KL7 HFQ  
ROGER HANSEN  
POB 520343  
BIG LAKE AK 99652

**TEN TEC**  
**ALL AMERICAN HF EQUIPMENT**

If you want to have hands on experience before you make a purchase come on out and tune the world using a **Paragon**, **OMNI V**, **Delta II**, **Corsair II** and in **about 10 days the OMNI VI**. You can even have fun with the **Argonaut II QRP** rig. Try Digital Modes with **PKTgold** or **KAgold**, the ultimate software for the Amateur. Try out the **Bencher** paddles and the **Ace System** keyers. Dig through all the literature I brought back from Dayton along with a video. Call **345-7837** after May 8th and plan a visit for a couple of hours. **73/Bill/KL7KI**

SPECIALIZING IN "HUD" PROPERTIES

Real Estate  
Broker

**FRED TOLIVER**

130 W. Int'l Airport Rd. # T  
Anchorage, Alaska 99518  
Bus. (907) 562-4865  
Res. (907) 346-2900

**NEO LIFE**

*Independent Distributor*

**ACCENT ON HEALTH**

**WILLIAM & ELEANOR REITER**

Family Health Consultants

P.O. Box 141106 • Anchorage, Alaska 99514

(907) 337-1779